Sub A3

What is claimed is:

1. In a distributed computer network, a method of transporting data from a sending host computer system to a receiving host computer system, the data being stored on a plurality of LUNs, the method comprising:

creating a point–in copy of a volume, the volume having the data to be transported;

generating a backup components document, wherein the document includes location information related to the data to be transported;

importing the backup components document to the receiving host computer system; and

accessing transported data using information in the backup components document.

2. A method as defined in claim 1 wherein the backup components document comprises:

a self-contained description of where the data resides and how the data is to be restored.

3. A method as defined in claim 2 wherein the backup components document further comprises:

a description of physical resources necessary to restore and access the data.

4. A method as defined in claim 1 further comprising:

identifying a set of original volumes to be copied and transported, the set comprising two or more volumes of data;

creating a point-in-time copy of the set of volumes;

importing the set of volumes onto the receiving host computer system; and

reconstructing set information relating to mapping information from the original volumes to the point–in–time copy volumes from the receiving host computer system.

5. A method as defined in claim 4 further comprising:

following the act of identifying a set of original volumes to be copied and transported and prior to the act of creating the point-in-time copy, determining the plurality of LUNs that compose the volume;

polling a plurality of providers in the network environment to determine whether the LUNs are supported;

determining one provider that supports the LUNs that compose the volume to create the point-in-time copy; and

instructing the provider that supports the LUNs that compose the volume to create the point-in-time copy.

6. A method as defined in claim 1 wherein the data to be transferred comprises a volume of data and wherein the volume of data is stored on at least a portion of one or more LUNs, the method further comprising:

marking portions of the original LUNs to identify the portions as being associated with the volume to be transported;

creating a point–in–time copy of each LUN having a portion of the volume to transported;

evaluating the marked portions of the point–in–time copy LUNs; and

based on the evaluation act, hiding portions of the point–in–time copy LUNs not associated with the volume to be transported.

7. A method as defined in claim 6 wherein the act of marking portions of the LUN to identify the portions as being associated with the volume to be transported marks the portions of the original LUNs as hidden and read–only and wherein, based on the evaluation act, only the portions of the point–in–time copy LUNs associated with the volumes to be transported are unhidden.

8. A method as defined in claim 6 wherein the act of marking portions of the LUN to identify the portions as being associated with the volume to be transported marks all volumes on LUNs being transported as hidden and read only and based on the evaluation act, only the portions of the point–in–time copy LUNs associated with the volumes to be transported are unhidden.

9. A method as defined in claim 1 wherein the data to be transferred comprises a volume of data and wherein the volume of data is stored on at least a portion of one or more LUNs, the method further comprising:

storing the original state of portions of the LUNs to be copied;

opening a volume handle to allow marking of the volume;

marking portions of the original LUNs to identify the portions as being associated with the volume to be transported;

creating the point–in–time copy of each LUN having a portion of the volume to transported;

closing the volume handle; and

restoring the volume to its original state.

10. A method as defined in claim 9 wherein the act of closing the volume handle is caused by a system crash.

11. A method as defined in claim 9 wherein the backup component document comprises an XML document.

12. A method as defined in claim 1 wherein the act of creating the point–in–time copy of the volume comprises creating the point–in–time copy of each LUN having a portion of the volume to transported; and wherein the method of transporting data further comprises:

identifying each of the LUN copies;

requesting information relating to each of the LUN copies; and

receiving identifying information related to each of the LUN copies, wherein the identifying information is stored in the backup components document.

13. A method as defined in claim 12 wherein a hardware provider creates the LUN copies and provides the identifying information.

Rule 1.126 14. A method as defined in claim ~~14~~ 13 wherein the backup component document comprises an XML document.

Rule 1.126 15. A method as defined in claim 1 wherein the act of creating the point–in–time copy of the volume comprises creating the point–in–time copy of each LUN having a portion of the volume to transported; and wherein the act of accessing transported data using information in the backup components document further comprises:

for each LUN copy, identifying the provider that created the LUN copy;

in response to locating one of the providers, requesting that the provider make all LUN copies visible;

locating visible LUNs;

matching visible LUNs to identified LUNs in the backup component document; and

upon matching visible LUNs with identified LUNs, importing visible LUNs.

Rule 1.126 16. A method as defined in claim ~~16~~ 15 wherein the act of requesting that the LUN copy be made visible comprises placing the LUN copy in the same zone as the receiving host computer system and unmasking the LUN copy.

Rule 1.126 17. A method as defined in claim ~~17~~ 16 wherein the act of requesting that the LUN copy be made visible is repeated for each LUN copy identified in the backup components document.

19. A method as defined in claim 17 wherein the act of locating visible LUNs comprises performing a SCSI rescan of the providers in the distributed network system.

20. A method as defined in claim 17 wherein the act of matching visible LUNs to identified LUNs in the backup component document comprises:

determine visible LUN information using SCSI inquiry commands;

for each provider, request additional LUN information to determine which provider is responsible for the visible LUN;

receive additional information about the visible LUN from the provider responsible for the LUN; and

compare additional information to the identified LUN information to determine if the visible matches the identified LUN.

21. A method as defined in claim 20 further comprising:

determining whether other LUNs are visible; and

if so, matching the visible LUNs with identified LUNs.

22. A method as defined in claim 20 further comprising:

upon determining matching LUNs, determine associated volumes; and

importing volumes to the receiving host computer system.

23. A method as defined in claim 22 further comprising:

identifying each volume imported to the host computer system;

for each imported volume, determine whether the volume should be transported using information in the backup components document; and

unhiding each volume to be transported.

24. A method as defined in claim 1 wherein the act of creating the point–in–time copy of the volume further created a point–in–time copy of a plurality of volumes associated with a plurality of LUNs, and wherein the method further comprises:

requesting the deletion of one point–in–time copy volume; and

deleting one of the point–in–time copy volumes while maintaining at least one other point–in–time copy volume.

27. A method as defined in claim 24 wherein the method further comprises:

in response to the request to delete one point–in–time copy volume, evaluating the plurality of point–in–time copy volumes to determine which volumes would remain following deletion of the one point–in–time copy volume;

determine which LUNs used by the point–in–time copy volume to be deleted;

for each LUN used by the point–in–time copy volume to be deleted, determine whether the LUN is used by another point–in–time copy volume;

if not, free the LUN.

26. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 1.

27. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 23.

27. A computer program product readable by a computer and encoding instructions for executing the method recited in claim 25.

28. A system for transporting data across a system area network, the system comprising:

a storage subsystem module that stores data for at least one host computer system, the data stored in one or more LUNs.

a requestor module for requesting the transportation of data stored in the storage subsystem, the transportation involving the transfer of information from a first host computer system to a second host computer system, the requesting module requesting the transportation of volume of information stored on a portion of one or more LUNs;

a point–in–time copy interface module for receiving the request and generating an instruction to create a point–in–time copy, wherein the instruction comprises identification information related to LUNs having portions of the volume to be copied; and

a provider module for receiving the instruction to create a point–in–time copy of the LUNs and for creating the point–in–time copy of those LUNs, the provider providing mapping information to the point–in–time copy interface relating to location information for the point–in–time copy.

29. A system as defined in claim 28 wherein the point–in–time copy interface further comprises:

a control module that determines which provider in the system supports the LUNs that compose the volume.

30. A system as defined in claim 28 wherein the point–in–time copy interface generates a backup component document describing the volume to be transported and wherein the system further comprises:

an importer module for importing the backup component document, and using the information in the component backup document accesses the point–in–time copy of the volume to be transported.

31. A system as defined in claim 30 wherein the provider marks all the LUNs as read only and hidden and wherein the importer module only exposes portions of the LUNs relating to the volumes to be transported.

32. A system as defined in claim 31 wherein the act of exposing the portions of the LUNs involves unhiding the portions.